REMARKS

Claim 1-29 and 35-48 are pending. Claims 1, 15, and 47 are in independent form.

Objections to the Specification

In the action mailed January 10, 2008, the specification was objected to as failing to provide proper antecedent basis for "computer readable data storage media."

Applicant respectfully disagrees. Attention is respectfully directed to para. [0012], which describes that computer-readable media include electronic, optical, magnetic, or other storage devices.

Accordingly, applicant respectfully requests that the objection to the specification be withdrawn.

Rejections under 35 U.S.C § 103(a)

Claims 1 and 15 were rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,724,571 to Woods (hereinafter "Woods") and U.S. Patent Publication No. 2003/0115191 to Copperman et al. (hereinafter "Copperman").

Claim 1 relates to a computer-implemented method that includes receiving, from a user, a request for information that includes a definition of a concept list comprising an origin concept, a relationship between the origin concept and an evaluated concept, and a distance representing a strength of the relationship between the origin concept and the evaluated concept, and a target scope that characterizes a document region to which the concept list is to be applied, receiving a definition of an extraction rule, determining a target score for the document regions of the article, applying the extraction rule to the article to determine an extract from the article, and outputting the extract in response to the request for information. The extraction rule definition comprises an

extraction scope that characterizes a document region to be extracted. The score represents how well the document regions relate to the concept list. The application of the extraction rule is based on the determined target score.

Claim 15 relates to an article that includes one or more computer-readable data storage media containing program code operable to cause one or more machines to perform operations. The operations are related to the activities recited in claim 1.

The rejections of claims 1 and 15 gloss over a fundamental distinction between the recited subject matter and the content of Woods and Copperman. In particular, claims 1 and 15 relate to requests for information and responses to such requests. The requests for information include a definition of a concept list comprising an origin concept, a relationship between the origin concept and an evaluated concept, and a distance representing a strength of the relationship between the origin concept and the evaluated concept, and a target scope that characterizes a document region to which the concept list is to be applied.

In contrast, requests for information in Woods and Copperman do not include these features. For example, Woods' requests for information are understood to be a single "search query phrase (consisting of one to many terms)." *See Woods*, col. 5, line 67-col. 6, line 3. *See also Woods*, col. 3, line 28-35 (describing his system as "particularly effective" at handling short (i.e., two to six word) search queries).

In Copperman, the requests for information can be developed during an iterative, guided search process. In particular, Copperman describes an iterative process in which a search query is received and concepts/topics are matched to the search query. *See, e.g., Copperman*, para. [0054]. *See also id.*, para. [0051] (describing that terms in a user query that are evidence of concepts are first extracted and then used as the basis for guided search routines). Copperman's

FIGS. 9A-9E illustrate one example of the matching of concepts/topics to a search query in Copperman's iterative, guided search process. *See, e.g., id.*, paras. [0081], [0017]-[0021]. As shown in, e.g., FIG. 9A, a textual search query is first received from a user. *See, e.g., id.*, para. [0081]. As shown in, e.g., FIG. 9C, the response to the search query can include results that match a "primary group feature" that was "spotted" in the terms of the search query, as well as "related features." As best understood, Copperman's features are terms or phrases. *See id.*, para. [0052]. The "related features" can be used to narrow the scope of the search and reduce the number of documents "in play." *See, e.g., id.*, paras. [0054], [0081]. Thus, the requests for information in Copperman are an initial search query along with any subsequently selected "related features" that narrow the scope of the initial search query.

Therefore, neither Woods' single search query phrase, nor Copperman's initial search query and any subsequently selected "related features," describe or suggest requests for information that include a definition of a concept list comprising an origin concept, a relationship between the origin concept and an evaluated concept, and a distance representing a strength of the relationship between the origin concept and the evaluated concept, and a target scope that characterizes a document region to which the concept list is to be applied, as recited in claims 1 and 15. Lacking such requests, Woods and Copperman also fail to describe or suggest responding to such requests, as recited in claims 1 and 15.

Indeed, the rejections of claims 1 and 15 lack even a bald contention that Woods and Copperman describe or suggest the receipt of a request for information that includes a relationship between an origin concept and an evaluated concept and a distance representing a strength of the relationship between the origin concept and the evaluated concept, as recited in

claims 1 and 15. Instead, the rejection is understood to contend that receiving and responding to such requests for information is obvious based on Copperman's knowledge map. *See Office action mailed January 10, 2008*, paragraph bridging pages 6-7 (pointing to Copperman's FIG. 2).

Applicant disagrees. Knowledge map 200 is a collection of taxonomies 210 in which concept nodes are connected by edges. *See, e.g., Copperman*, para. [0037]. Copperman maps a collection of documents or other content by weighted tags to knowledge map 200. *Id.* In particular, the documents in a corpus are assigned to particular concept nodes by a document classifier 445. *See, e.g., id.*, para. [0049]. Thus, Copperman is concerned with classifying documents in a corpus using knowledge map 200. Copperman does not receive (or respond to) requests for information that include knowledge map 200.

Thus, Woods and Copperman fail to describe or suggest receiving requests for information, or responding to such requests, as recited in claims 1 and 15. Even if Woods and Copperman were combined, one of ordinary skill would not arrive at the recited subject matter. Accordingly, claims 1 and 15 are not obvious over Woods and Copperman.

The rejections of claims 1 and 15 are based on a number of erroneous contentions that allegedly support the rejection. For example, the rejections contend that Woods' receipt of a "*search query phrase (**consisting of one to many terms**)*" constitutes the receipt of a request for information that includes a definition of a concept list. *See Office action mailed January 10, 2008*, page 4, line 1-4 (emphasis in original).

Applicant respectfully disagrees. Those of ordinary skill do not equate a collection of terms in a search query with a list of concepts. Indeed, Woods himself is directed to the proposition that traditional term-based searching is insufficient as failing to encompass concepts. *See, e.g., Woods*, col. 1, line 15-42. For example, Woods describes that term-based searching can generate an excessively large number of hits, omit paraphrase variations from a result set, and ineffectively rank passages in a result set. *Id.*

As an alternative, Woods describes that a semantic network of terms and concepts (i.e., term/concept relationship network 110) is to be constructed *independently of a query* by analyzing a corpus of documents. *See, e.g., Woods*, col. 5, line 7-14. The semantic network is then used to connect terms in queries with the text of the documents in the corpus. *See, e.g., Woods*, col. 5, line 7-14. *See also id.*, col. 5, line 66-col. 7, line 56 (describing how the terms in a search query are matched to the classified documents). Thus, Woods himself does not consider a collection of terms in a search query to be a list of concepts. Instead, the terms in a search query must be matched with the concepts in a semantic network so that concept-based searching can proceed.

If the Examiner insists on maintaining the rejection, Applicant respectfully requests that the Examiner explain how a collection of terms in a search query constitutes a list of concepts, especially in light of Woods' explicit description that it does not.

Another example of an erroneous contention on which the rejections are based is the contention that one of ordinary skill would combine Woods and Copperman to arrive at the subject matter recited in claims 1 and 15 "in order to classify documents according to the most pertinent concept or concepts." *See Office action mailed January 10, 2008*, page 4, line 1-4 (emphasis in original).

It appears that this contention is based on Woods' and Copperman's classification of documents based on semantic networks. As discussed above, Woods describes that a corpus of documents is to be analyzed to construct term/concept relationship network 110. Copperman describes that documents in a corpus are to be assigned to particular concept nodes in a knowledge map 200. Thus, in both cases, Woods and Copperman are concerned with classifying documents.

However, claims 1 and 15 recite that a request for information includes a definition of a concept list that comprises an origin concept, a relationship between the origin concept and an evaluated concept, and a distance representing a strength of the relationship between the origin concept and the evaluated concept. Claims 1 and 15 also recite that a target score that represents how well the document regions relate to the concept list is determined and that an extract is output in response to the request for information based on the target score.

These features are not part of the classification of documents, nor is there any reason to believe that those of ordinary skill would have found these features obvious based on the classification of documents in Woods and Copperman. Indeed, as discussed above, given that the classification of documents in Woods and Copperman is tangential to the receipt and response to requests for information recited in claims 1 and 15, even if Woods and Copperman were combined "in order to classify documents," there is no reason to believe that those of ordinary skill would arrive at the recited subject matter.

For these and other reasons, claims 1 and 15 are not obvious over Woods and Copperman. Applicant respectfully requests that the rejections of claims 1, 15, and the claims dependent therefrom be withdrawn.

Claim 47 relates to a computer-implemented method for extracting a subset of a document. The method includes receiving, from a user, a request for information that describes a combination of two or more concept lists, receiving a description of a document region targeted for extraction, accessing a document, based on the target definition and the document regions targeted for extraction, extracting one or more regions of the accessed document, and making the extracted regions available for output in response to the request for information. Each concept list is defined by an origin concept, a relationship between the origin concept and an evaluated concept, and a distance representing a strength of the relationship between the origin concept and the evaluated concept. The two or more concept lists are combined using an operation to define a target definition that is to be detected.

Woods and Copperman neither describe nor suggest that a request for information that describes a combination of two or more concept lists be received, as recited in claim 47. In this regard, as discussed above, Woods' requests for information are understood to be a single search query phrase consisting of one to many terms. Copperman's requests for information are an initial search query along with any subsequently selected "related features" that narrow the scope of the initial search query. In either case, the requests for information are not concept lists that are defined by an origin concept, a relationship between the origin concept and an evaluated concept, and a distance representing a strength of the relationship between the origin concept and the evaluated concept, much less a combination of two or more concept lists, as recited in claim 47.

Thus, even if Woods and Copperman were combined, one of ordinary skill would not arrive at the recited subject matter. Accordingly, claim 47 is not obvious to those of ordinary skill. Applicant respectfully requests that the rejections of claim 47 and the claims dependent therefrom be withdrawn.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue, or comment does not signify agreement with or concession of that rejection, issue, or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

No fee are believed due at this time. Please apply any charges or credits to deposit account 06-1050.

Respectfully submitted,

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John F. Conroy
Reg. No. 45,485

Fish & Richardson P.C.
PTO Customer No. **26192**
12390 El Camino Real
San Diego, California 92130
Telephone: (858) 678-5070
Facsimile: (858) 678-5099

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